the cells contained dark granular matter or fine granular fat, and there was much free oil, with numerous large crystals of cholesterine."

Feb. 24. *Rheumatoid Arthritis; Eburnation.*—Dr. WILLARD presented the specimens and furnished the following history:—

These specimens were discovered while engaged as assistant demonstrator in the anatomical rooms of the University of Pennsylvania, and therefore are unaccompanied by previous history. They are the scapulæ and humeri. The head of the right humerus was found displaced from the glenoid cavity, and occupying a position upon the anterior inferior face of the neck of the scapula, where it had formed a new articulation; osseous tissue being thrown up about it in such abundance that the cavity was nearly as deep as the original glenoid. Glenoid cavity itself was filled with osseous deposit to such extent that but little of its former appearance remained, and the whole head and neck of scapula were greatly roughened with same growths. Coracoid process also somewhat implicated. The displacement of humerus had apparently been effected by a gradual absorption of the rim of the glenoid, and the subsequent deposit of this new bone had confined it in its abnormal position. On left side same changes had begun to take place, but had not yet reached such an advanced state, and humerus was not displaced, although glenoid cavity was excessively roughened. The head of humerus and inferior face of acromion presented a most beautiful specimen of eburnation, being polished to the utmost brilliancy. All articulations of the skeleton were similarly affected, in varying degrees.

Cystic Distension of Fallopian Tube.—Dr. WILLIAM PEPPER presented a uterus and appendages. The right Fallopian tube is healthy. The free extremity had become attached to the side of the uterus, and had become distended with clear watery fluid, so as to form a thin-walled cyst three inches in diameter. The Fallopian tube was also largely distended throughout its entire extent.

March 10. *Two Cases of Bony Deposit in the Eye.*—Dr. HARLAN presented the specimens, and read the following history:—

The first is from a patient operated upon at the Wills Ophthalmic Hospital, and the following record was made of the case by the resident surgeon, Dr. Wilson: "S. S., female, æt. 46, applied for admission to the hospital September, 1869, suffering severely with pain in the left eye and sympathetic irritation of the right. States that, thirty years ago, the left eye began to fail after some inflammatory trouble (of which no definite account can be obtained). Five months afterwards, the sight of that eye was entirely gone; from this time, however, the eye gave her no trouble until three months ago, when, after using the other eye for some time in sewing by lamplight, the blind one began to be very painful and has troubled her constantly since. About three months before admission, the right eye began to fail. She noticed that it soon became fatigued with sewing or reading, and that it was very painful in a bright light, as sunlight, though not at all so when shaded. At the time of admission, she could not use her eye for small objects a minute without suffering a stinging sensation in it and intense pain in the other eye. The left eye was hard and somewhat atrophied, and the cornea opaque. No pain on pressure. Above the cornea, and slightly to the nasal side, there was a small sclerotic staphyloma."

The left eye was extirpated, with immediate relief from pain. I am unable to say how far she regained the use of the other eye, as the patient lived at a distance and left the hospital in a few days.

Dissection of Globe.—Sclerotic wrinkled from shrinking of contents, its structure apparently not altered. Cornea opaque and flat. Nothing remarkable in the appearance of choroid. Iris adherent to cornea; when separated from it, which is easily done, the membrane of Descemet follows it and is seen as a transparent curtain across the pupil. Lens of normal size, or perhaps rather large, yellowish-white, and as hard as a pebble. Hyaloid fossa lined with a firm tough membrane, having very much the appearance of cartilage. No remains of vitreous.

The retina having, as is usually found to be the case in atrophied bulbs, left the choroid and followed the shrinking vitreous, is recognized in shreds of tissue stretching from the optic nerve entrance to the ora serrata. Within the choroid, and nearly equal to it in extent, is a thin but firm bony shell, terminating anteriorly in a ragged edge, and deficient posteriorly at the position of the optic disk.

The other specimen is from a patient of Dr. Morton's, upon whom I assisted him to operate. The globe was extirpated on account of sympathetic irritation of the other eye. There was nothing unusual in the history of the case; it was one of long-continued inflammation. There was no opportunity for careful dissection. The bony formation in this case is a disk that occupied the fundus of the eye, extending to about one-third of the distance from the optic nerve entrance to the ora serrata. Like the other specimen, it lay immediately within the choroid, and is deficient at the point corresponding to the optic disk.

The following is the result of a microscopical examination made by Dr. W. W. Keen :—

CASE I. The bony development showed very distinct but imperfectly developed lacunæ, but no distinct Haversian canals were seen. The retina was much firmer than normal, but this is partly if not wholly due to the alcohol in which it has been kept. The main bulk of it was seen to consist of the atrophied bloodvessels, with some fibrous tissue and an enormous quantity of small oil globules. Quite a number of crystals of cholesterine were also seen. The lens consisted of an outer hard capsule and an inner friable mass, white and chalk-like. The latter was mostly carbonate of lime, as it effervesced with acids. The outer capsule consisted of an indistinct granular substance, effervescing with acids, but possessing no true bone corpuscles. The choroid consisted almost wholly of fibrous tissue, with a few bloodvessels partly atrophied. The pigmentary layer had disappeared, save here and there a single cell.

CASE II. The bony portion showed very imperfectly developed lacunæ, but a number of well-developed Haversian canals. The retina was rather firmer than usual, probably owing in part to the alcohol. It consisted of a very few vessels, with a little fibrous and granular matter, and a large number of oil globules and multitudes of crystals of cholesterine, occurring both singly and in groups. Choroid as in the first case.

A number of similar formations are recorded, and there has been a good deal of discussion from time to time in regard to their nature, particularly in reference to the existence of Haversian canals. Mackenzie says, "They present traces of lacunæ under the microscope, but no Haversian canals." Stellwag speaks of "indications of Haversian canals." He says: "The ossification of these new formations begins from the external layers, while new connective tissue layers are placed on the inner surface." Virchow speaks very decidedly on the subject in the following extract which Dr. Keen has translated for me from the work on "Morbid Tumours:"—

"They are most frequent as small osteomata on the free surface of the choroid. They are mostly flat bones, which seem to lie on the vascular tunic, or to have taken the place of the retina, and therefore have often been described as ossifications of the retina. They generally lie in the posterior part of the eye; sometimes, however, stretching quite far forwards. They consist of good, firm, osseous tissue, moderately rich in vessels, proceeding, as a rule, from connective tissue, but sometimes from cartilage. That they are the result of chronic choroiditis is certain."

From their position next the choroid, and from the great difficulty, in many cases, of detecting any traces of the retina, it is not surprising that these formations have often been mistaken for ossifications of the retina; and, indeed, Stellwag says, that when any part of the degenerated retina remains in contact with the bony plate, it also becomes bony. If new layers of connective tissue are formed on the inner surface after the outer layers are ossified, it would seem that these bony plates are capable of independent growth. As they are among the recognized causes of sympathetic ophthalmia, it is worth while to bear in mind the possibility of their presence in deciding upon the operation to be performed. It is evident that not much could have been accomplished in either of these cases by any operation less thorough than that of extirpation of the globe. An interesting point in the history of the first case is the fact, that nearly thirty years intervened between the inflammation that destroyed the sight of the left eye and the appearance of sympathetic irritation of the right.

Suppression of the Urine; Jaundice.—Dr. HUTCHINSON presented the liver and kidneys of a man, æt. 40, who died in the Pennsylvania Hospital March 7, 1870. The following points of his history are of especial interest in connection with the disease of which he died: In the year 1860 he contracted gonorrhœa, which did not yield very readily to treatment, and seems to have given rise to a stricture of the urethra; for, on several occasions during the last seven years, catheterization has been resorted to to relieve his bladder of its contents. He has lived a roving life, but has never been excessively intemperate, nor has he ever had a chancre. On the 23d of February he found he was unable to pass his water, but does not appear to have sought medical assistance until the next day. It is not known whether or not the physician applied to succeeded in introducing a catheter into his bladder; but as no relief was obtained, he applied for and gained admission into the surgical wards of the Pennsylvania Hospital on the evening of February 24th. No difficulty was experienced in passing a catheter into the bladder; but as no urine flowed through it, percussion was performed over the hypogastric region, and the bladder found to be empty. Twelve hours later, ten fluidounces of a very dark-coloured liquid, which contained albumen, and under the microscope a large number of red blood corpuscles were passed naturally and without difficulty. The next evening jaundice supervened.

Feb. 27. The patient was transferred to the medical wards, and the following is from the notes taken at that time: "No urine has been passed since that above alluded to; percussion over the region of the bladder still gives a clear sound; the pulse is 82; the respirations